



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
2170 SW Canal Street  
Stuart, FL 34997

REPLY TO  
ATTENTION OF

Regulatory Division  
Special Projects and Enforcement Branch  
SAJ-1994-4532(IP-AAZ)  
Modification #17

JUN 14 2007

South Florida Water Management District  
Attn: Ron Bearzotti  
3301 Gun Club Road  
West Palm Beach, FL 33416

Dear Mr. Bearzotti:

Reference is made to your letter dated April 27, 2007, requesting a modification to the Department of the Army permit number SAJ-1994-4532(IP-AAZ) issued on March 13, 1997. The original permit authorized the placement of fill for levees, canals, control structures, and pump stations for several components of the Everglades Construction Project (ECP). The project is located adjacent to the Stormwater Treatment Area (STA) 3/4 at the Crown Castle Communication Tower Cell Site "L" in Section 21, Township 47 South, Range 38 East, Palm Beach County, Florida.

Your proposed modification is to install two 24-inch culverts in an existing ditch which would allow excess stormwater to drain from the Crown Castle Communication Tower Cell Site "L" into the L-5 Canal during high flood events. Minor vegetation removal is needed to clean out the ditch and install the culverts. Soil would be excavated at one area along the existing ditch to degrade a berm so that the water can flow into the existing ditch. The excavated soil material will be placed along the extended portions of the berm so that wetlands will not be impacted. The SFWMD has proposed to stop pumping the excess stormwater into the STA 3/4 once the culverts are installed. The Corps has evaluated this project with the following understandings which are incorporated herein as Special Conditions to the modification:

1. The acceptable storm event to the SFWMD that was used for site evaluation and design was the 25-year, 2-day storm event.

2. The pad for the cell tower and electrical equipment cabinets will be raised to a minimum elevation of 12.34 NAVD. It is understood that the actual electrical circuitry will be elevated similar to that of existing conditions, i.e. approximately 24 inches or higher above the pad.

3. The property itself will not require mitigated flood damage reduction measures to offset impact created by local projects. Only the pad is of importance to the owners.

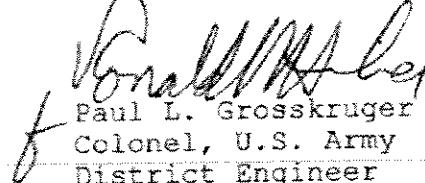
4. In recognition of Item 3, the drainage of the site as designed will only reduce peak stages, not flooding of the site with the design event occurrence. However, the raised pad should remain above flood with the proposed design.

5. The design shall not impact onsite wetlands and wetland vegetation as the proposed passive drainage system will prevent long durations of flood while preventing overdrainage, as ensured by the SFWMD.

6. The proposed 24-inch diameter culverts being sited in a natural setting will require undefined periodic routine maintenance (O&M) to ensure that blocking or fill in does not occur. This effort shall be the responsibility of the SFWMD and is required to ensure the design as constructed performs to expectations during future storm events.

If any changes to the project or the above Special Conditions are proposed, additional coordination with the Corps will be required. The impacts of the modification on the environment have been evaluated and found to be insignificant. The permit is hereby modified as described above. All other conditions of the permit remain in effect. You should attach this letter to the permit. If you have any questions regarding this document, please contact Alisa Zarbo at the letterhead address, by telephone at 772-219-8418, or by email at Alisa.A.Zarbo@saj02.usace.army.mil.

Sincerely,

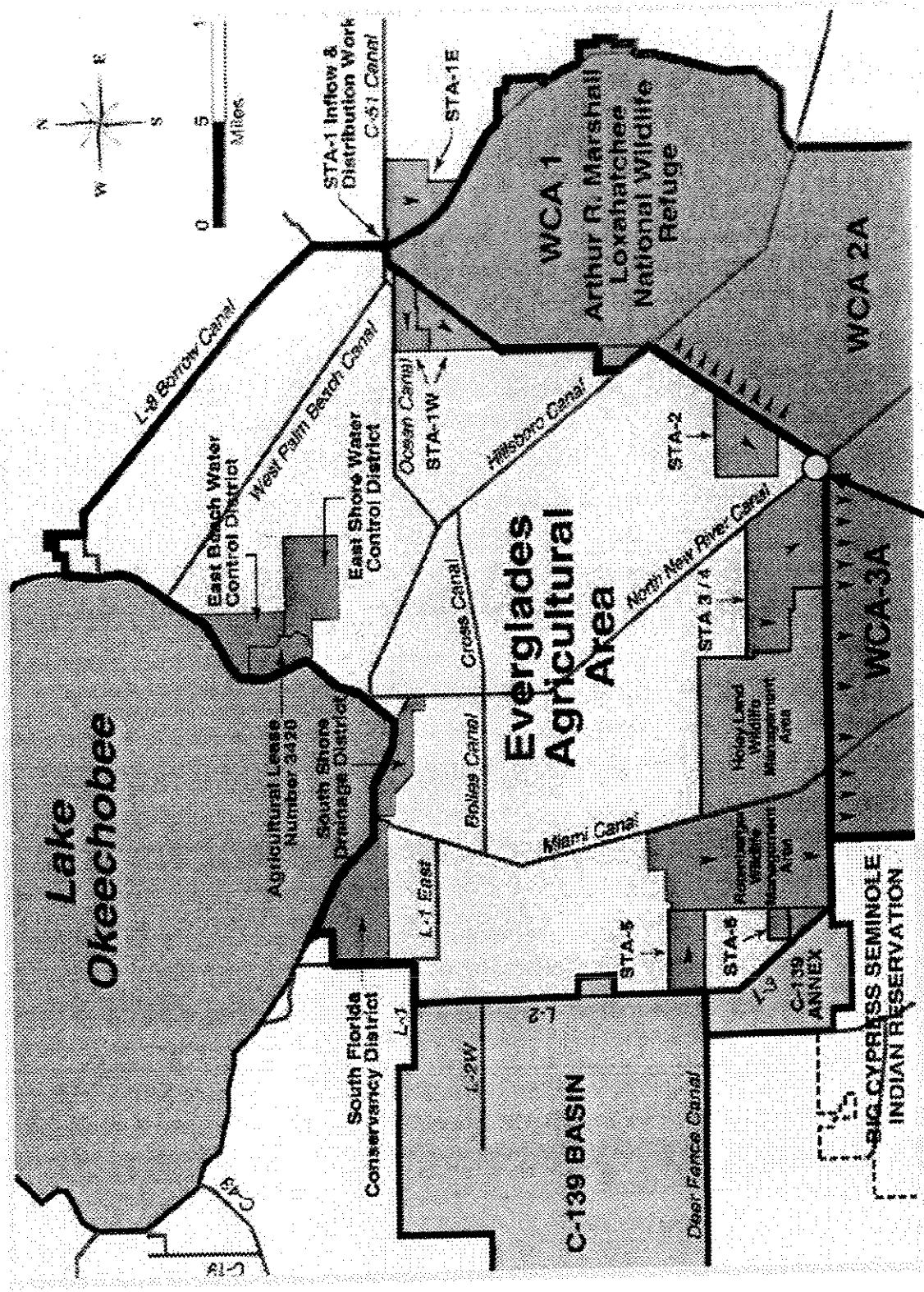


Paul L. Grosskruger  
Colonel, U.S. Army  
District Engineer

Enclosures

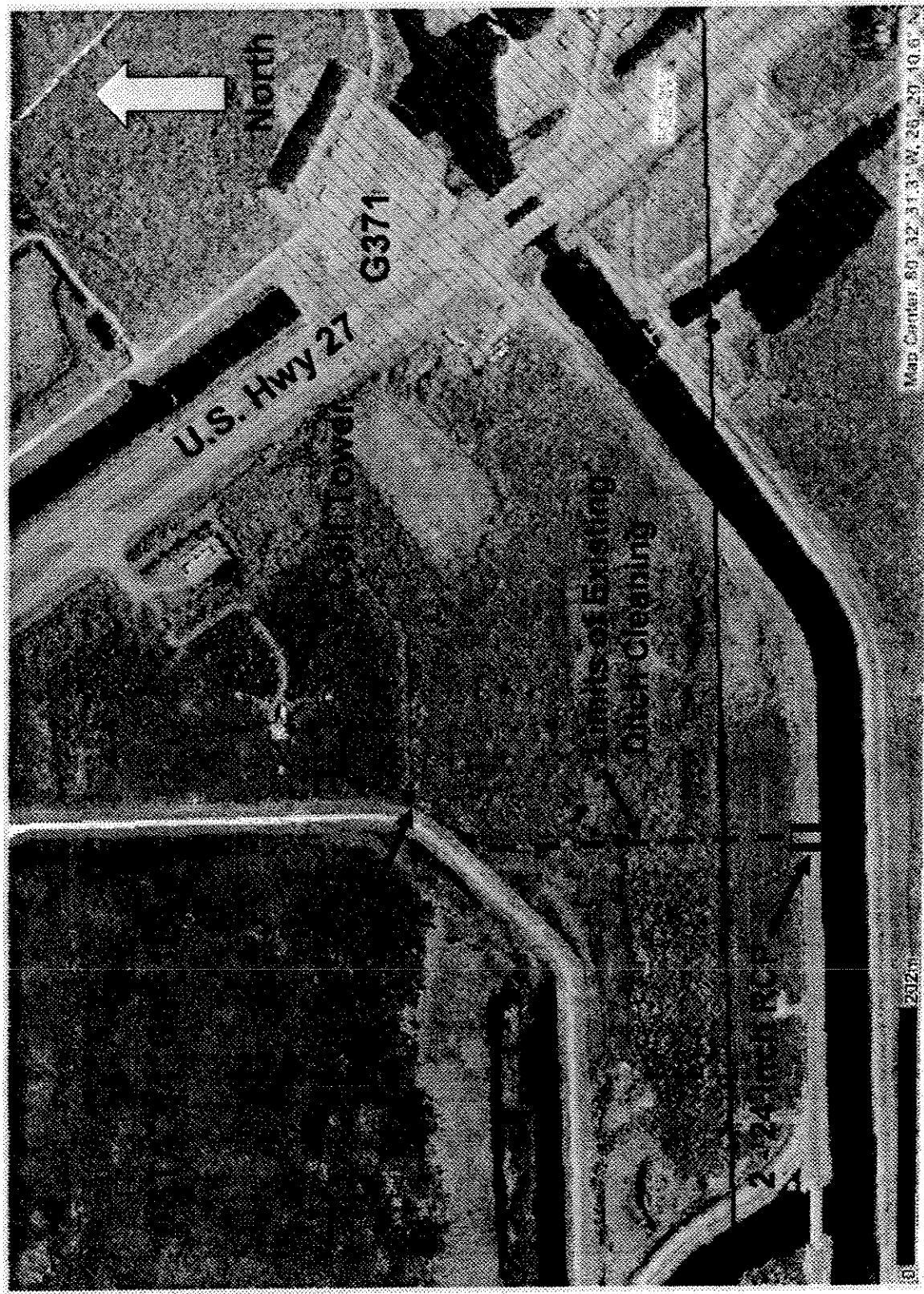
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# STA 3/4 – Crown Castle Communications Tower



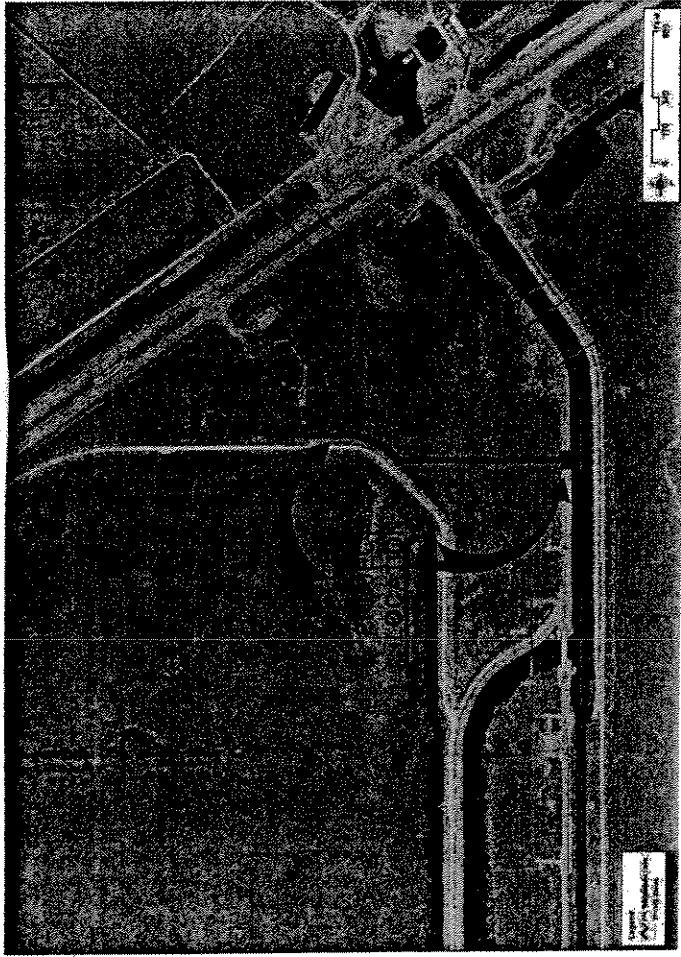
**Project Location**

# STA 3/4 – Crown Castle Communications Tower



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
**CROWN CASTLE COMMUNICATION TOWER CELL SITE "L"**  
**FLOOD PROOFING IMPROVEMENTS**

SECTION 21, TOWNSHIP 47 SOUTH, RANGE 38 EAST PALM  
BEACH COUNTY, FLORIDA



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CAROL ANN WEHLE  
EXECUTIVE DIRECTOR

**LOCATION MAP**  
SCALE 1" = 300'

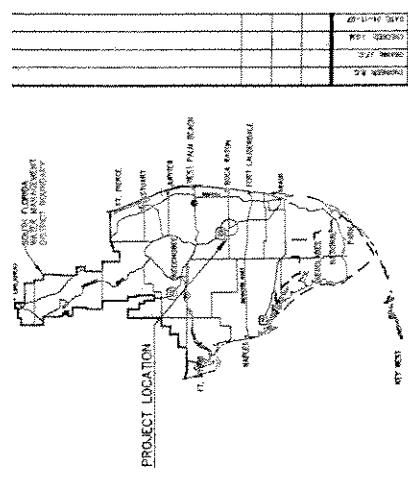
**INDEX OF SHEETS**

C.0 COVER SHEET AND LOCATION MAP  
C.1 LAYOUT PLAN  
C.2 CULVERT DETAIL  
C.3 GENERAL NOTES & DETAILS

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PROJECT NO. **C.0**  
DRAFT DATE **5/15/2020**  
EXPIRE DATE **5/31/2020**

PAGE **1** OF **2**



SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
ENGINEERING & CONSTRUCTION DEPARTMENT  
PHONE: 386-629-5200  
FAX: 386-629-5201  
WEB: [www.sfwmd.gov](http://www.sfwmd.gov)

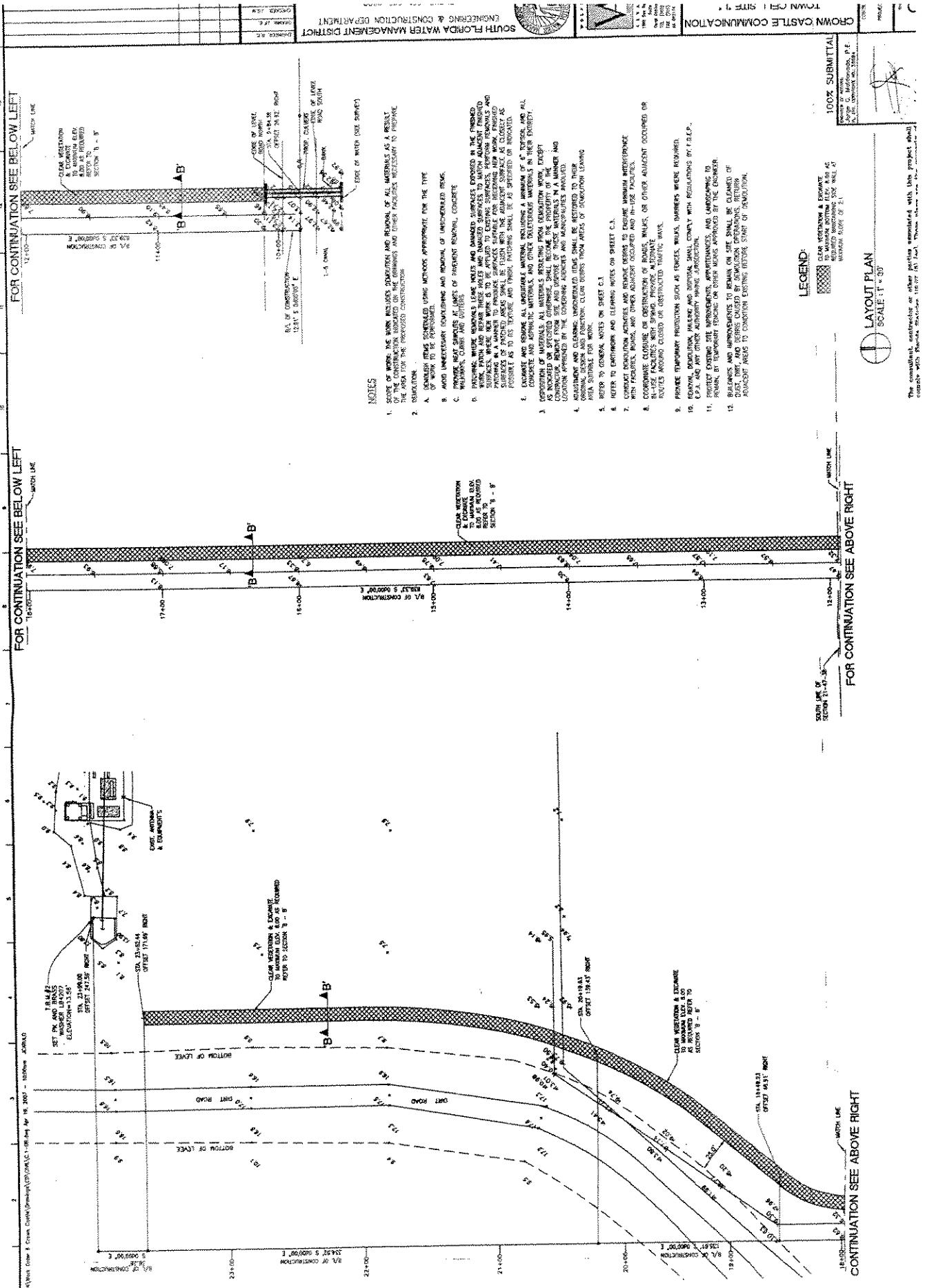


TOWN CELL SITE LLC  
CROWNS CASTLE COMMUNICATIONS  
FLOOD PROOFING IMPROVEMENTS

100% SUBMITTAL  
DRAFTED BY: [Signature]  
DRAWN BY: [Signature]

*SECTION 21,  
CROWN CASTLE  
TOWER*

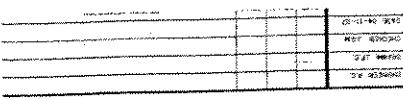
REV. NO. 1



The contractor, architect or other parties associated with this project shall comply with Florida Statute 100-7 (a) (1), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), (n), (o), (p), (q), (r), (s), (t), (u), (v), (w), (x), (y), (z).

100% SUBMITTAL



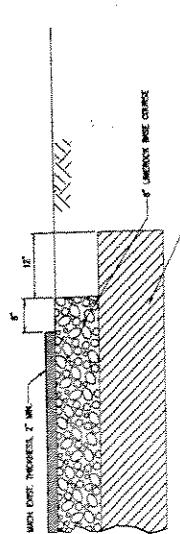


**GENERAL NOTES**

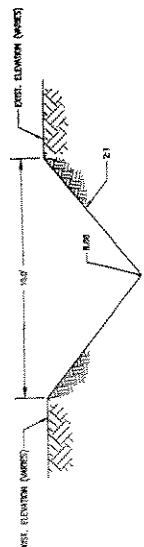
1. REPAVED BASE MATERIAL OVER 12IN. SHALL BE THREE THE THICKNESS OF THE ORIGINAL BASE, MINIMUM 1 1/2 INCHES.
2. BASE MATERIAL SHALL BE LAYED IN 6 INCH LAYERS, MEASUREMENT LAYER TO LAYER, EACH LAYER THICKNESS 1 1/2 INCHES.
3. ASPHALT CONCRETE PAVING MATERIALS SHALL BE RECOMMENDED BY OWNER.
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH THE SPECIFIED SURFACE MATERIAL.
5. BASE MATERIAL SHALL HAVE A MINIMUM LEE OF 10% AND A MINIMUM COMPRESSIVE STRENGTH OF 1000 PSI.
6. ASPHALT CONCRETE PAVING MATERIALS SHALL CONFORM TO A 1 1/2 INCH APPROXIMATELY 100% BY WEIGHT REINFORCED FILL MATERIAL FROM THE MANUFACTURER.
7. BASE MATERIAL SHALL CONFORM WITH THE ORIGINAL REQUIREMENTS OF CONTRACTORS FILL IN ACCORDANCE WITH TABLE 12 AND 12.

**PAVEMENT CUT RESTORATION FOR  
CULVERT CROSSING**

SCALE: 1:16



**TYPICAL PAVEMENT SECTION**



**DITCH SECTION 'B - B'**

THE VAST MAJORITY OF THE GRADE ELEVATION AREA AROUND THE AREA TO BE CLEARED OF VEGETATION SHALL BE AT ELEVATION BELOW 10'. THIS DITCH SECTION SHALL BE CONSTRUCTED ONLY IN AREAS WHERE THE GRADE ELEVATION IS ABOVE 10'.

**GENERAL NOTES:**

1. LUMBER AGGREGATE, SHALL CONSIST OF MATERIAL CONFORMING TO SECTION 911 "LUMBER AND BRIDGE CONSTRUCTION, LATEST EDITION, MATERIAL FOR BASE AND STABILIZED BASE OF THE FOOT STANDARD SPECIFICATIONS FOR READING AND BRIDGE CONSTRUCTION, LATEST EDITION, IF REQUIRED, SHALL CONFORM TO THE REQUIREMENTS OF FLOOR SECTION 911.
2. LUMBER USED FOR BASE STABILIZATION, IF REQUIRED, SHALL MEET THE REQUIREMENTS OF FLOOR SECTION 911.
3. ON-SITE MATERIALS MEETING THE REQUIREMENTS ARE SUITABLE FOR USE.
4. SPREAD LUMBER MATERIAL ON THE PREPARED SUBGRADE IN TWO SEPARATE OPERATIONS WHEN A STABILIZED BASE IS SPECIFIED.
5. SPREAD IN A SINGLE LAYER WHEN STABILIZATION IS NOT REQUIRED.
6. ONLY THE FIRST LAYER IS TO BE PROCESSED INTO THE SURFACE SOIL.
7. LUMBER SURFACING MATERIALS SHALL BE GROUP 1 AGGREGATES, CONFORMING TO THE REQUIREMENTS OF FLOOR SECTION 20A "FORMED AGGREGATE BASE."
8. ONE-SITE MATERIALS MEETING THE REQUIREMENTS ARE SUITABLE FOR USE.
9. SURFACE SHALL SHOW NO DEVIATION IN EXCESS OF 3/8 INCH IN ANY 10 FEET WHEN TESTED WITH A 10-FOOT STRAIGHT EDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO THE CENTERLINES OF THE PAVED AREA.

**2. BASE STABILIZATION:**

10. INCORPORATE THE FIRST LIFT OF AGGREGATE INTO THE TOP 6 INCHES OF THE SUBGRADE BY BLADING, SCRAPING, TILING, AND DISKING AS NECESSARY TO OBTAIN A UNIFORM TEXTURE OF AGGREGATE AND SUBGRADE SOIL.
11. COMPACT THE MATURED SURFACE BY USE OF A TAMPER ROLLER HAVING A MINIMUM LOAD ON EACH TAMPER OF 250 POUNDS PER SQUARE INCH OF TAMPERING AREA.
12. CONTINUE COMPACTION UNTIL THERE IS NO VISIBLE EVIDENCE OF FURTHER CONSOLIDATION; BUT NOT LESS THAN THREE COMPLETE COVERS.
13. CONTROL MOISTURE CONTENT OF MIXTURE AS NECESSARY TO PROVIDE A DESIRED "WATERHOLDING" SURFACE UPON COMPLETION OF CONSTRUCTION.
14. CONTINUE SHAPING AND COMPACTION UNTIL A TRUE, UNIFORM SURFACE IS OBTAINED.
15. COMPLETE FINAL ROLLING USING A HYDRAULIC-TIRE ROLLER WEIGHING NOT LESS THAN 5 TONS.
16. CORRECT ANY RUTS OR SOFT SPOTS ENCOUNTERED PRIOR TO SPREADING SECOND LIFT OF AGGREGATE.
17. SPREAD SECOND LIFT OF AGGREGATE AND GRADE TO A UNIFORM THICKNESS.
18. COMPACT BY ROLLING, HAULING AND SPREADING EQUIPMENT UNIFORMLY OVER THE SURFACE.
19. CONTINUE GRADING THE SURFACE UNTIL THE SURFACE IS FREE FROM RUTS AND WAVES.

**3. BITUMINOUS MATERIALS:**

- A. BITUMINOUS PRIME AND TACK COAT SHALL BE COMPOSED OF MATERIALS AND SHALL BE PLACED IN ACCORDANCE WITH FLOOR SECTION 300 "PRIME AND TACK COATS FOR BASE COURSES," WITH THE EXCEPTION OF PARAGRAPHS 300-B AND 300-C RELATING TO MEASUREMENT AND PAYMENT, WHICH DO NOT APPLY.
- B. SPRINKLE SURFACE WITH WATER IMMEDIATELY IN ADVANCE OF APPLICATION IF SURFACE IS EXCESSIVELY DRY.
- C. APPLY PRIME COAT ONLY WHEN BASE COURSE IS DRY ENOUGH TO PERMIT UNIFORM DISTRIBUTION AND DESIRED PENETRATION.
- D. APPLY AT RATE NOT LESS THAN (0.25) GALLONS PER SQUARE YARD TO PREPARED SURFACE.
- E. ALLOW SURFACE TO DRY FOR NOT LESS THAN (48) HOURS WITHOUT BEING DISTURBED.
20. ASPHALT CONCRETE
- A. EQUIPMENT AND MATERIALS SHALL CONFORM TO FLOOR SECTION 320 "NOT BITUMINOUS MATERIALS - PLANT, METHODS, AND EQUIPMENT."
- B. ASPHALTIC CONCRETE PAVEMENT SHALL BE CONSTRUCTED OF TYPE II AS DESCRIBED IN FLOOR SECTION 331 TYPE S ASPHALT CONCRETE.
- C. PLACEMENT OF ALL ASPHALTIC CONCRETE PAVEMENT SHALL CONFORM TO THE REQUIREMENTS OF FLOOR SECTION 330 "NOT BITUMINOUS MATERIALS - QUALITY ASSURANCE, GENERAL CONSTRUCTION REQUIREMENTS AND ACCEPTANCE PROCEDURES."

**5. MARKING PAINT:**

- A. TRAFFIC LANE MARKING PAINT SHALL MEET THE REQUIREMENTS OF FLOOR SECTION 971 "COATINGS MARKERS AND RETINUEDS ADHESIVE," ARTICLE 971-12 OR ARTICLE 706-13.4 IF FAST DRY TYPE PAINT IS SPECIFIED.
- B. BITUMINOUS ADHESIVE, MEETING THE REQUIREMENTS OF SECTION 706, ARTICLE 706-2-4, SHALL BE USED FOR BURNDING THE MARKERS TO THE PAVEMENT.
- C. INSTALL IN LOCATIONS DESIGNATED ON THE DRAWINGS.
- D. INSTALL AFTER APPLICATION OF MARKING PAINT.

**GENERAL NOTES AND DETAILS**

SCALE: 1:16

The enclosed underwriter or other parties associated with this project shall comply with Florida Statute 367.01. These plans are the property of the District and must be returned and maintained by the architect. Retain by any parties interested in the project.

RECEIVED SOUTH FLORIDA WATER MANAGEMENT DISTRICT DEPT. OF ENGINEERING & CONSTRUCTION 1000 N.W. 2nd Avenue, Suite 1000 Fort Lauderdale, Florida 33301-2600 (305) 733-1555	RECEIVED SOUTH FLORIDA WATER MANAGEMENT DISTRICT DEPT. OF ENGINEERING & CONSTRUCTION 1000 N.W. 2nd Avenue, Suite 1000 Fort Lauderdale, Florida 33301-2600 (305) 733-1555
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RECEIVED TOWN CELL SITE LLC CROWN CASTLE COMMUNICATIONS 1000 N.W. 2nd Avenue, Suite 1000 Fort Lauderdale, Florida 33301-2600 (305) 733-1555	RECEIVED CROWN CASTLE COMMUNICATIONS 1000 N.W. 2nd Avenue, Suite 1000 Fort Lauderdale, Florida 33301-2600 (305) 733-1555
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